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10656478 - GAIU 2624
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(Not for submission under 37 CFR 1.99)

Application Number	10656478
Filing Date	2003-09-05
First Named Inventor	Hassan MOSTAFAVI
Art Unit	2624
Examiner Name	Andrae S. Allison
Attorney Docket Number	VM 03-009-US

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	1	6138302		2000-10-31	Sashin et al.	
	2	6144874		2000-11-07	Du	
	3	6144875		2000-11-07	Schweikard et al.	
	4	6146390		2000-11-14	Heilbrun et al.	
	5	6165181		2000-12-26	Heilbrun et al.	
	6	6185445		2001-02-06	Knuttel	
	7	6185446		2001-02-06	Carlsen Jr.	
	8	6198959		2001-03-06	Wang	

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	9	6216029		2001-04-10	Paltiel		
	10	6259943		2001-07-10	Cosman et al.		
	11	6269140		2001-07-31	Takagi et al.		
	12	6272368		2001-08-07	Alexandrescu		
	13	6296613		2001-10-02	Emmenegger et al.		
	14	6300974		2001-10-09	Viala et al.		
	15	6307914		2001-10-23	Kunieda et al.		
	16	6348058		2002-02-19	Melkent et al.		
	17	6370217		2002-04-09	Hu et al.		
	18	6405072		2002-06-11	Cosman		
	19	6434507		2002-08-13	Clayton et al.		

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	20	6473635		2002-10-29	Rasche	
	21	6501981		2002-12-31	Schweikard et al.	
	22	6526117		2003-02-25	Okerlund et al.	
	23	6527443		2003-03-04	Vilsmeier et al.	
	24	6611617		2003-08-26	Crampton	
	25	6621889		2003-09-16	Mostafavi	
	26	6661617		2003-02-25	Hipwell, Jr. et al.	
	27	6665370		2003-12-16	Bruder et al.	
	28	6724930		2004-04-20	Kosaka et al.	
	29	6888919		2005-05-03	Graf	
	30	6937696		2005-08-30	Mostafavi	

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	31	5828770		1998-10-27	Leis et al.	
	32	6697761		2004-02-24	Akatsuka et al.	
	33	4335427		1992-06-15	Hunt et al.	
	34	4727882		1988-03-01	Schneider et al.	
	35	7306564		2007-12-11	Nakatani et al.	
	36	7314451		2008-01-01	Halperin et al.	
	37	7609810		2009-10-27	Yi et al.	
	38	7349522		2008-03-25	Yan et al.	

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U.S.PATENT APPLICATION PUBLICATIONS

Examiner Initial*	Cite No	Publication Number	Kind Code ¹	Publication Date	Name of Patentee or Applicant of cited Document	Pages, Columns, Lines where Relevant Passages or Relevant Figures Appear
	1	20020023652		2002-02-28	Riaziat et al.	

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	2	20030007593		2003-01-09	Heuscher et al.		
	3	20030007601		2003-01-09	Jaffray et al.		
	4	20030063292		2003-04-03	Mostafavi		
	5	20030072419		2003-04-17	Bruder et al.		
	6	20030188757		2003-10-09	Yanof et al.		
	7	20030210812		2003-11-13	Khamene et al.		
	8	20040005088		2004-01-08	Jeung et al.		
	9	20040068169		2004-04-08	Mansfield et al.		
	10	20040071337		2004-04-15	Jeung et al.		
	11	20040116804		2004-06-17	Mostafavi		
	12	20040218719		2004-11-04	Brown et al.		

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FOREIGN PATENT DOCUMENTS

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Examiner Initials*	Cite No	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, pages(s), volume-issue number(s), publisher, city and/or country where published.	T ⁵
	1	MANKE, D. et al. "Respiratory Motion in Coronary Magnetic Resonance Angiography: A Comparison of Different Motion Models" J. Magnetic Resonance Imaging (2002) 15:661-671.	<input type="checkbox"/>
	2	McCONNELL, M.V. et al. "Comparison of Respiratory Suppression Methods and Navigator Locations for MR Coronary Angiography" AJR (May 1997) 168:1369-1375.	<input type="checkbox"/>
	3	McCONNELL, M.V. et al. "Prospective Adaptive Navigator Correction for Breath-Hold MR Coronary Angiography" MRM (1997) 37:148-152.	<input type="checkbox"/>
	4	MOERLAND, M.A. et al.; "The Influence Of Respiration Induced Motion Of The Kidneys On The Accuracy Of CZ Radiotherapy Treatment Planning, A Magnetic Resonance Imaging Study", Radiotherapy Oncol. 30, pp. 150-154 (1994).	<input type="checkbox"/>
	5	MORI, M. et al.; "Accurate Contiguous Sections Without Breath-Holding On Chest CT; Value of Respiratory Gating and Ultrafast CT"; AJR:162. May 1994; pp. 1057-1062.	<input type="checkbox"/>
	6	MOSTAFAVI, H.; "Method and System for Radiation Application"; Application No.: 10/678,741; Filed October 3, 2003; Attorney Docket No. VM7012094003; Specification 63 pgs.; Claims 9 pgs; Abstract 1 pg; Drawings 22 pgs.	<input type="checkbox"/>

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	7	MOSTAFAVI, Hassan; "Overview of Post-Processing Algorithm to Create Volumetric Motion Sequences"; Varian Medical Systems, Inc.; May 2. 2002; 1 page.	<input type="checkbox"/>
	8	NEVATIA, R. et. Al. "Human Body Tracking with Articulated Human Body Model" (November, 2002) pgs. 1-3.	<input type="checkbox"/>
	9	NIKOLAOU, K. et al. "Navigator Echo-Based Respiratory Gating for Three-Dimensional MR Coronary Angiography: Reduction of Scan Time Using a Slice Interpolation Technique" J. Computer Assisted Tomography (2001) 25 (3):378-387.	<input type="checkbox"/>
	10	OHARA, K. et al.; "Irradiation Synchronized With Respiration Gate"; Int. J. Radial. Oncol., Biol. Phys. 17; pp. 853- 857; (October 1989).	<input type="checkbox"/>
	11	OSHINSKI, J.N. et al.; "Two-Dimensional Coronary MR Angiography Without Breath Holding"; Radiology 201; pp.737-743; (December 1996).	<input type="checkbox"/>
	12	PARADIS, A.L. et al. "Detection of Periodic Signals in Brain Echo-Planar Functional Images" IEEE (January 1, 1997) pgs. 696-697.	<input type="checkbox"/>
	13	PELTOLA, Seppo M.Sc.; "Gated Radiotherapy To Compensate For Patient Breathing"; Proceedings of the Eleventh Varian Users Meeting; Macro Island, Florida; May 11-13. 1986; 4 pages.	<input type="checkbox"/>
	14	PLEIN, S. et al. "Three-Dimensional Coronary MR Angiography Performed with Subject-Specific Cardiac Acquisition Windows and Motion-Adapted Respiratory Gating" AJR (Feb.2003) 180:505-512.	<input type="checkbox"/>
	15	POST, J.C. et al. "Three-Dimensional Respiratory-Gated MR Angiography of Coronary Arteries: Comparison with Conventional Coronary Angiography" AJR (June 1996) 166:1399-1404.	<input type="checkbox"/>
	16	RAMSEY, C.R. et al.; "Clinical Efficacy Of Respiratory Gated Conformal Radiation Therapy", Medical Dosimetry 24; pp. 115-119: (1999).	<input type="checkbox"/>
	17	RAMSEY, C.R. et al.; "A Comparison Of Beam Characteristics For Gated And Nongated Clinical X-Ray Beams"; Med. Phys. 26; pp. 2086-2091; (October 1999).	<input type="checkbox"/>

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	18	REGENFUS, M. et al. "Comparison of Contrast-Enhanced Breath-Hold and Free-Breathing Respiratory-Gated Imaging in Three-dimensional Magnetic Resonance Coronary Angiography" Am. J. Cardiology (Oct. 1, 2002) 90:725-730.	<input type="checkbox"/>
	19	RITCHIE, C. J., et al.; "Predictive Respiratory Gating: A New Method To Reduce Motion Artifacts on CT Scans"; Radiology; 1994; pp. 847-852; Vol. 190; NO.3.	<input type="checkbox"/>
	20	ROBINSON, Terry E., et al.; "Standardized High-Resolution CT of the Lung Using A Spirometer-Triggered Electron Beam CT Scanner"; AJR:172; June 1999; pp. 1636-1638.	<input type="checkbox"/>
	21	ROGUS, R.D. et al.; "Accuracy Of A Photogrammetry-Based Patient Positioning and Monitoring System For Radiation Therapy"; Med. Phys. 26; pp. 721-728; (May 1999).	<input type="checkbox"/>
	22	ROSENZWEIG, K.E. et al.; 'The Deep Inspiration Breath Hold Technique In The Treatment Of Inoperable Non-Small-Cell Lung Cancer"; Int. J. Radiat. Oncol., Biol., Phys. 48; pp. 81-87; (August 2000).	<input type="checkbox"/>
	23	ROSS, C.S. et al.; "Analysis Of Movement Of Intrathoracic Neoplasms Using Ultrafast Computerized Tomography"; Int. J. Radia/. Oncol., Bioi., Phys. 18; pp. 671-677; (March 1990).	<input type="checkbox"/>
	24	RUNGE, V.M. et al.; "Respiratory Gating In Magnetic Resonance Imaging at 0.5 Tesla"; Radiology 151; pp. 521-523; (May 1984).	<input type="checkbox"/>
	25	SACHS, T.S. et al.; "Real-Time Motion Detection In Spiral MRI Using Navigators", Magn. Reson. Med. 32; pp. 639-645; (November 1994).	<input type="checkbox"/>
	26	SCHAR, M. et al. "The Impact of Spatial Resolution and Respiratory Motion on MR Imaging of Atherosclerotic Plaque" J. Magnetic Resonance Imaging (2003) 17:538-544.	<input type="checkbox"/>
	27	SCHWARTZ, L.H. et al.; "Kidney Mobility During Respiration"; Radio/her. Oncol. 32; pp. 84-86; (1994).	<input type="checkbox"/>
	28	SHIRATO, H. et al.; "Four-Dimensional Treatment Planning And Fluoroscopic Real-Time Tumor Tracking Radiotherapy For Moving Rumor"; Int. J. Radial. Oncol., Bioi., Phys. 48; pp. 435-442; (September 2000).	<input type="checkbox"/>

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	29	SINKUS, Ralph. et al.; "Motion Pattern Adapted Real-Time Respiratory Gating"; Magnetic Resonance in Medicine 41; 1999; pp. 148-155.	<input type="checkbox"/>
	30	SOLBERG, Timothy D., et al.; "Feasibility of Gated IMRT"; Proceedings of the 22nd Annual International Conference of the IEEE Engineering in Medicine and Biology Society, Chicago, IL (July 23-28, 2000) 3pps: 2732-2734	<input type="checkbox"/>
	31	SPUENTRUP, E. et al. "Respiratory motion artifact suppression in diffusion-weighted MR imaging of the spine" Eur. Radiol. (2003) 13:330-336.	<input type="checkbox"/>
	32	SURAMO, M.P. et al.; "Cranio-caudal Movements Of The Liver, Pancreas And Kidneys on Respiration", Acta Radiol. Diagn. 2; pp. 129-131; (1984).	<input type="checkbox"/>
	33	TADA, Takuhito, et al.; "Lung Cancer: Intermittent Irradiation Synchronized With Respiratory Motion-Results Of A Pilot Study"; Radiology, June, 1998; Vol. 207; No.3; pp. 779-783.	<input type="checkbox"/>
	34	THICKMAN, D. et al. "Phase-Encoding Direction upon Magnetic Resonance Image Quality of the Heart" Magnetic Resonance in Medicine (1988) 6:390-396.	<input type="checkbox"/>
	35	van GEUNS, R.J.M. et al.; "Magnetic Resonance Imaging Of The Coronary Arteries: Clinical Results From ThreeDimensional Evaluation Of A Respiratory Gated Technique"; Heart 82; pp. 515-519; (October 1999).	<input type="checkbox"/>
	36	WANG, Y. et al. "Navigator-Echo-based Real-Time Respiratory Gating and Triggering for Reduction of Respiration Effects in Three-dimensional Crotmry MR Angiography" Radiology (1996) 198:55-60.	<input type="checkbox"/>
	37	WANG, Y. et al. "Respiratory Motion of the Heart: Kinematics and the Implication for the Spatial Resolution in Coronary Imaging" Magnetic Resonance in Medicine (1995) 33:713-719.	<input type="checkbox"/>
	38	WANG, Y. et al.; "Implications For The Spatial Resolution in Coronary Imaging"; Magnetic Resonance in Medicine 33; 1995; pp. 713-719.	<input type="checkbox"/>
	39	WEBER, C. et al. "Correlation of 3D MR coronary angiography with selective coronary angiography: feasibility of the motion adapted gating technique" Eur. Radiol. (2002) 12:718-726.	<input type="checkbox"/>

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	40	WEIGER, Markus, et al.; "Motion-Adapted Gating Based on k-Space Weighting For Reduction of Respiratory Motion Artifacts"; Magnetic Resonance in Medicine 38; 1997; pp. 322-333.	<input type="checkbox"/>
	41	WIESMANN, F. "High-Resolution MRI with Cardiac and Respiratory Gating Allows for Accurate in Vivo Atherosclerotic Plaque Visualization in the Muring Aortic Arch" Magnetic Resonance in Medicine (2003) 50:69-74.	<input type="checkbox"/>
	42	WONG, J.W. et al.; "The Use Of Active Breathing Control (ABC) To Reduce Margin For Breathing Motion"; In/. J. Radial. Oncol., Phys. 44; pp. 911-919; (JULY 1999).	<input type="checkbox"/>
	43	WOOD, M. L. and R. M. Henkelman "Suppression of respiratory motion artifacts in magnetic resonance imaging" Med. Phys. (Nov/Dec 1996) 13(6):794-805.	<input type="checkbox"/>
	44	WOODARD, P.K., et al.; "Detection of Coronary Stenoses on Source and Projection Images Using Three-Dimensional MR Angiography With Retrospective Respiratory Gating: Preliminary Experience"; AJR:170; April 1998; No.4; 00. 883-888.	<input type="checkbox"/>
	45	WORTHLEY, S.G. et al. "Cardiac gated breath-hold back blood MRI of the coronary artery wall: An in vivo and ex-vivo comparison" Int'l J. Cardiovascular Imaging (2001) 17:195-201.	<input type="checkbox"/>
	46	YAMASHITA, Y. et al. "MR Imaging of Focal Lung Lesions: Elimination of Flow and Motion Artifact by Breath-Hold ECG-Gated and Black-Blood Techniques on T2-Weighted Turbo SE and STIR Swquences" J. Magnetic Resonance Imaging (1999) 9:691-698.	<input type="checkbox"/>
	47	YORKE, E. et al.; "Respiratory Gating Of Sliding Window IMRT"; 22nd Annual EMBS International Conference. Chicago, IL.; pp. 2118-2121; (July 23-28. 2000).	<input type="checkbox"/>
	48	YUAN, Q. et al.; "Cardiac-Respiratory Gating Method For Magnetic Resonance Imaging Of The Heart"; Magn. Reson. Med. 43; pp. 314-318; (February 2000).	<input type="checkbox"/>
	49	VEDAM, S.S. et al., "Acquiring a four-dimensional computed tomography dataset using an external respiratory signal" Phys. Med. Bio. 48 (2003), pp. 45-62.	<input type="checkbox"/>
	50	International Search Report and Written Opinion dated February 5, 2007 for PCT/US2005/034999.	<input type="checkbox"/>

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